

AMENDMENTS TO THE SPECIFICATION

On page 5, please replace paragraph [0018] with the following paragraph:

In addition to RAM, the instructions in an embodiment of the present invention may be contained on a data storage device with a different data processing system readable storage medium, such as a floppy diskette. FIG. 2 illustrates a combination of software code elements 204, 206, 208 and 210 that are embodied within a data processing system readable medium 202 on a floppy diskette 200. Alternatively, the instructions may be stored as software code elements on a direct access storage device (DASD) array, magnetic tape, conventional hard disk drive, electronic read-only memory (ROM), optical storage device, compact disc (CD) ROM or other appropriate data processing system readable medium or storage device.

On page 6, please replace paragraph [0025] with the following paragraph:

A technique can be used for efficiently building the timeseries data for price and quantity for each item may use relatively constant-sized memory and be performed in a time which is a linear function of the number of rows. The method involves changing the row order of the transaction data so that all records for each item are in contiguous rows (note the data does not need to be sorted). This will be referred to as a "grouping algorithm" (note that this is different from the structured query language (SQL) "group by" command). Grouping algorithms can run in linear time, meaning the time to perform the task is directly proportional to the amount of input data, and use disk resources for "scratch pad" storage.

On page 8, please replace paragraph [0035] with the following paragraph:

Moving sum windows may be used to help address the continuity of the quantity timeseries. Many products in a store will tend to be "slow moving" and may sell only a few units each week, with several days going by between sales. Such products are difficult for conventional techniques such as auto-regressive integrated moving average (ARIMA) to forecast, since they are a discontinuous function. To address this problem, it is possible to use moving sums to replace every day in the timeseries with the sum of that day and each of the X (e.g., 30) days that follow. This technique can improve predictive accuracy because the low-frequency patterns (seen more with items that only occasionally are sold) may be easier to predict than the high frequency patterns. The moving average exaggerates those lower frequency patterns. The 30-day windows are also intuitively appealing because forecasts can be interpreted as "W units per 30 days". Windows other than 30 days in width may also be used, for instance, slower-moving merchandise may require longer time windows.

On page 14, please replace paragraph [0070] with the following paragraph:

Weighing factors are determined by stepwise regression and are placed into the matrix of weighting factors for the variable-variable-quantity interactions. All other elements (less significantly affected or weakly correlated) in the matrix may be assigned a value of zero. Typically, no more than approximately ten percent of all elements within the matrix may have a non-zero value, and often, no more than approximately one percent of all elements has a non-zero value.